

I claim:

1. A system for tracking a mobile vehicle comprising:

a device, mounted to the underside of said vehicle, said device comprising a GPS electro-magnetic signal processor means in hard-wire connection to a first wireless communication means, said first communication means being enabled for wireless communication with a remote communication means;

GPS antenna means connected to said GPS signal processor means, having stacked ground and positive plates separated by a separator plate, said positive plate having an exposed face engaged by a polymeric composition containing particles of a conductive metal, said GPS antenna means being enabled to receive electromagnetic GPS signals transmitted from an orbiting satellite;

wherein said GPS signal processor means is enabled to generate data from signals received from said GPS antenna means which identify geographic location of said GPS signal processor means; said data identifying geographic location is transported by hard-wire connection to said first wireless communication means; and said first wireless communication means converts said data to an appropriate wireless radio signal and transmits said wireless radio signal to said remote communication means.

2. The system of claim 1 wherein said first wireless communication means is arranged to transmit a signal through hard-

wire connection to said GPS signal processor means, which enables said GPS signal processor means to perform a function in response.

3. The system of claim 2 wherein said first wireless communication means is arranged to receive a wireless radio signal from said remote communication means and in response thereto to transmit a signal to said GPS signal processor means which initiates a change in the performance of its data generation function.

10
15

4. The system of claim 3 wherein the signal transmitted to the GPS signal processor means initiates or stops data generation by the GPS signal processor means.

15 5. The system of claim 3 wherein the signal transmitted to the
GPS signal processor initiates a change in processing parameters by
the GPS signal processor means.

6. The system of claim 1 wherein said GPS antenna means, is
20 mounted to an underside surface of said vehicle.

7. The system of claim 6 wherein said GPS antenna means, is mounted to the underside of said vehicle by magnetic means.

8. The system of claim 6 wherein said device having a GPS electromagnetic signal processor means connected to said first wireless communication means, and said GPS antenna means, are both mounted to the underside of said vehicle by permanent magnet means.

5

9. The system of claim 6 wherein said GPS antenna means is not mounted in direct line-of-sight orientation with a GPS electromagnetic signal transmitting, orbiting satellite.

10
11
12
13
14
15
16
17
18
19
20

10. The system of claim 1 wherein a wireless radio signal transmission received by said remote communication means from said first wireless communication means of said device, is digitized for communication with computer means.

11. The system of claim 10 comprising computer means in communication with said remote wireless communication means, said computer means being enabled to send data to said remote wireless communication means which initiates the transmission of a wireless radio signal by said remote communication means to said first wireless communication means, which initiates a change in the performance of data generation function by said GPS processor means.

12. The system of claim 11 wherein said computer means can be accessed through the internet for remote viewing, tracking and functional control of data produced by said GPS processor means.

5 13. In a GPS antenna assembly having stacked ground and positive plates separated by a separator plate, the improvement comprising said positive plate having an exposed face engaged by a polymeric composition containing particles of a conductive metal.

10 14. The GPS antenna assembly of claim 13 wherein said polymeric composition encases said stacked ground and positive plates separated by a separator plate, intimately engaging exposed surfaces of said stacked positive, ground and separator plate.

15 15. The GPS antenna assembly of claim 13 comprising a metal shield base plate stacked adjacent said base ground plate.

20 16. The GPS antenna of claim 15 wherein said metal shield base plate comprises an electronic circuit board in electrical communication with said positive plate which is enabled to enhance electromagnetic radio signals received by said positive plate.

25 17. The GPS antenna assembly of claim 16 comprising a metal shroud arranged spaced from and stacked adjacent to said electronic circuit board.

18. The GPS antenna assembly of claim 17 wherein said polymeric composition encases said stacked shroud, shield base plate, ground plate, separator plate and positive plate, intimately engaging exposed surfaces thereof.

5

19. The GPS antenna assembly of claim 13 wherein said conductive metal particles comprise magnesium carbonate.

10 20. The GPS antenna assembly of claim 19 wherein said polymeric composition comprises polyester resin, styrene monomer, talc, magnesium carbonate powder and sodium borosilicate.

15 21. The GPS antenna assembly of claim 13 wherein said antenna is mounted to the exterior surface of the short leg of an "L" shaped bracket, the long leg being arranged for quick mounting to the underside of a vehicle.

20 22. The GPS antenna assembly of claim 21 wherein said bracket comprises an electrically conductive metal and the exterior surface of the long side of the "L" comprises a ceramic magnet sufficient for mounting said antenna to a metallic underside of said vehicle.

23. The GPS antenna assembly of claim 22 wherein said stacked plates and polymeric composition containing particles of conductive metal of said antenna are isolated from electrical conductive contact with said metal bracket.

5

24. The GPS antenna assembly of claim 23 wherein said antenna is attached to said bracket by non-conductive means.

10 25. The GPS antenna assembly of ~~claim~~ 24 wherein said non-conductive means comprises an epoxy.

15 26. The GPS antenna assembly of claim 21, wherein the positive plate of the antenna is oriented to face the exterior surface of the short leg of the bracket.